DEC STD 012-10 CONVENTIONS USED TO ASSIGN PART IDENTIFIERS WITH SIGNIFICANCE IN PART CLASSES 11, 15, 19, 21, AND 91

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ABSTRACT: This document explains several conventions that have been adopted to add significance within the variation field of part numbers.

APPLICABILITY: Mandatory for all Digital employees who assign part numbers within Digital.

STATUS: APPROVED 07-Aug-1989; type $ VTX SMC for expiration date.

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1 PURPOSE

The purpose of this document is to define the various conventions used to build significance into the variation field in part classes 11, 15, 19, 21, and 91.

2 PRECONDITIONED (BURNED-IN) PARTS

In classes 11, 15, 19, and 21, as defined in *DEC STD 012-2 Unified Numbering Code for Part Identifier Class Codes and Related Document Identifiers,*the convention for indicating a pre-conditioned version of a component is to replace the first character of the variation with the letter "B". For example, the pre-conditioned version of 19-12346-01 would be 19-12346-B1. Obviously, this system will only work on variations -01 through -09.

3 MACRO CELL ARRAYS (MCA)

Macro Cell Arrays have two conventions built into the variation field of the part numbers. One of them is obvious and the other is more subtle. When MCAs were first introduced, they were given acronyms that related to their functions, for example, NBAP01, which stood for Nautilus Backplane Address Parity. Subsequent revisions caused the numbers to increment; therefore, NBAP01 became NBAP02 and so forth.

When part numbers in class 19 were assigned, the variation always started with -01. This created confusion since the part number variation was not the same as the functional name. An agreement was reached whereby the assigned part number would carry the same variation as the functional name, even if it meant not assigning some variations. Therefore, it is possible to have a -02 and a -04 variation without having a -01 and a -03.

To compound the problem, the same functional device can and does have two different configurations. One has an attached heat sink stud, and the other does not. Since it was agreed that the variation would follow the functional revision, another scheme was needed to show the two configurations of the device.

As a result of this, a "U" is placed in the conventional variation field to denote the unassembled version; therefore, the unassembled version of 19-22628-02 is 19-22628-U2, and so forth. As in the previous convention, this will only work with variations -01 through-09

Examples:

Digital Part Number	Definitions
19-22631-01	MCA with attached stud for NBAP01
19-22631-U2	MCA without stud for NBAP02
19-22631-02	MCA with attached stud for NBAP02
19-22631-04	MCA with attached stud for NBAP04

4 91-CLASS WIRE AND TUBING

In 91-class, the variation has always been used to indicate color for wire and tubing. This applies only to hook-up wire and tubing purchased in bulk. If the wire or tubing is cut to size by the vendor, the variations are sequentially assigned without meaning.

4.1 SYSTEM RULES

If all possible variations were used (as many as 100 per number) it would unnecessarily load the data system. To prevent this, only those variations that are needed are placed on the data system.

4.2 SINGLE CONDUCTOR WIRE

The first character of the variation indicates the base color of the wire; the second character of the variation indicates the color of the tracer on the wire. If both numbers are the same, it indicates a solid color with no tracer. However, note that solid color insulation and insulation that has a tracer will by definition not have the same basic part number. The color code used for wire is as follows.

```
0   Black
1   Brown
2   Red
3   Orange
4   Yellow
5   Green
6   Blue
7   Purple
8   Gray
9   White
```

Examples:

```
91-07908-22 = red
91-07908-33 = orange
91-07914-23 = red with an orange tracer
```

4.3 TWISTED PAIRS

The color code used for twisted pairs, or two conductors, is the same as described under subhead 4.2. The first character of the variation code is the color of one wire, while the second indicates the color of the other wire. Both numbers could be the same, which means that both wires of the pair are the same color. Although this does happen, it is relatively rare. Only solid color wire that is used in twisted pairs can use this convention. In other words, wires with tracers are excluded.

On twisted pairs, the first character is always the lower numbered wire, and the complementary combination is excluded. For example, red and blue would be denoted by variation 26; 62 would not be used.

4.4 TUBING

Tubing purchased in bulk follows essentially the same rules as those used for hook-up wire. Tubing colors are indicated in the variation field as follows.

```
00  Black
01  Brown
02  Red
03  Orange
04  Yellow
05  Green
06  Blue
07  Purple
08  Gray
09  White
10  Clear (Transparent)
11  Natural (Translucent)
```

Teflon type E tubing is not available in clear, but is available in natural.

5 DYNAMIC RAMS

The assignment of variation identifiers for 21-class dynamic memories shall be based on a system whereby the characters of the variation would denote the access time of the device and the package type.

The first character specifies the package type.

```
-0x Denotes a dynamic RAM in a dual in-line package (DIP).
-1x Denotes a dynamic RAM in a ceramic leadless chip carrier
  package (CLCC).
-2x Denotes a dynamic RAM in a plastic  leaded chip carrier

  package (PLCC).
-3x Denotes a dynamic RAM in a small outline J-lead package
  (SOJ).
-4x Denotes a dynamic RAM in a zig-zag in-line package.
```

The second character will be the speed variation (RAS access time).

```
-x1 For a 200-nanosecond device.
-x2 For a 150-nanosecond device.
-x3 For a 120-nanosecond device.
-x4 For a 100-nanosecond device.
```

The five-digit base part number may then be considered assigned to the die of the integrated circuit. The two-digit variation identifier supplies information about the various options, package type and access time, to be qualified for that die.

Examples:

```
21-21414-21  This is a 200-nanosecond DRAM in a PLCC package.
21-21414-12  This is a 150-nanosecond DRAM in a CLCC package.
21-21414-03  This is a 120-nanosecond DRAM in a DIP package.
```

APPENDIX A

REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00012-02	*DEC STD 012-2 Unified Numbering Code for Part Identifier Class Codes*

Copies of Digital EL-Class documents may be obtained from Standards and Methods Control, NRO4/D4, DTN: 287-3724, JOKUR::SMC, or via VTX SMC.

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